

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P233096

Luminaire Tested: **FCB-24-2-LD4-44-50-UNV-EDD1**

Issue Date: 3/3/2020



**Test Information**

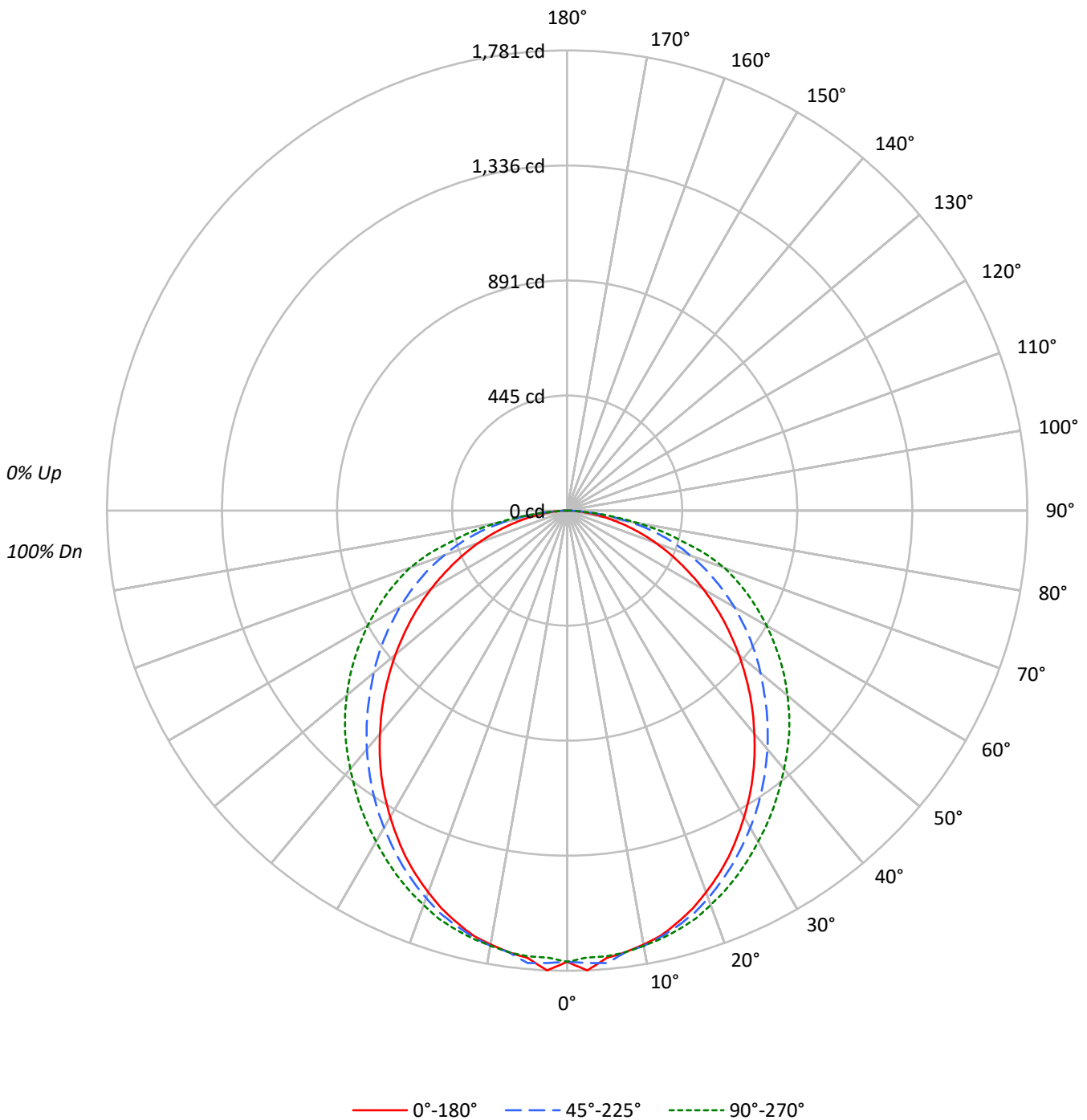
Test Method: LM-79-08  
Report Number: P233096  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25706)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-24-2-LD4-44-50-UNV-EDD1  
Description: FAILSAFE 2X2 FCB LED TROFFER  
OPAL DIFFUSER, NO LENS  
Light Source: (84)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4891.0 lumens  
Efficiency: N/A  
Efficacy: 117.0 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	70	64	87	77	69	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4698	4698	4698
5°	4696	4748	4677
10°	4660	4673	4673
15°	4598	4632	4671
20°	4502	4570	4652
25°	4393	4491	4626
30°	4257	4405	4597
35°	4118	4321	4586
40°	3960	4236	4587
45°	3801	4155	4625
50°	3634	4092	4660
55°	3459	4051	4720
60°	3277	4019	4800
65°	3074	3998	4922
70°	2863	3986	5090
75°	2596	3981	4822
80°	2249	3685	4276
85°	1908	2791	2717



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.6	3.4
10°-20°	469.0	9.6
20°-30°	697.7	14.3
30°-40°	825.2	16.9
40°-50°	848.1	17.3
50°-60°	775.0	15.8
60°-70°	620.0	12.7
70°-80°	389.1	8.0
80°-90°	101.3	2.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1332.3	27.2
0°-40°	2157.5	44.1
0°-60°	3780.6	77.3
0°-90°	4891.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4891.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1746	1746	1746	1746	1746	
5°	1739	1739	1758	1746	1732	165
15°	1651	1653	1662	1672	1677	465
25°	1479	1489	1513	1539	1558	680
35°	1253	1270	1315	1365	1396	783
45°	999	1025	1092	1173	1215	770
55°	737	773	863	958	1006	660
65°	483	526	628	723	773	479
75°	250	297	383	440	464	265
85°	62	78	90	88	88	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1745.8	1745.8	1745.8	1745.8	1745.8
2.5°	1781.4	1774.3	1752.9	1738.6	1731.5
5°	1738.6	1738.6	1757.7	1745.8	1731.5
7.5°	1724.4	1724.4	1724.4	1760.0	1724.4
10°	1705.3	1707.7	1710.1	1724.4	1710.1
12.5°	1683.9	1683.9	1688.7	1693.4	1695.8
15°	1650.6	1653.0	1662.5	1672.0	1676.8
17.5°	1614.9	1622.1	1634.0	1645.9	1655.4
20°	1572.1	1581.7	1595.9	1614.9	1624.5
22.5°	1526.9	1536.5	1555.5	1576.9	1593.5
25°	1479.4	1488.9	1512.7	1538.8	1557.9
27.5°	1424.7	1436.6	1465.1	1500.8	1519.8
30°	1370.0	1384.2	1417.5	1458.0	1479.4
32.5°	1312.9	1329.5	1367.6	1412.8	1438.9
35°	1253.4	1270.1	1315.3	1365.2	1396.1
37.5°	1191.6	1210.6	1260.6	1317.6	1350.9
40°	1127.4	1148.8	1205.9	1267.7	1305.8
42.5°	1063.2	1086.9	1148.8	1222.5	1260.6
45°	998.9	1025.1	1091.7	1172.6	1215.4
47.5°	932.3	963.3	1032.2	1122.6	1165.4
50°	868.1	899.0	977.5	1070.3	1113.1
52.5°	801.5	837.2	920.4	1015.6	1060.8
55°	737.3	773.0	863.4	958.5	1006.1
57.5°	673.1	708.8	803.9	901.4	949.0
60°	608.9	646.9	746.8	842.0	891.9
62.5°	544.7	585.1	687.4	784.9	832.4
65°	482.8	525.6	627.9	723.0	773.0
67.5°	423.4	468.5	568.4	661.2	711.1
70°	363.9	409.1	506.6	597.0	646.9
72.5°	306.8	352.0	447.1	528.0	566.1
75°	249.7	297.3	382.9	440.0	463.8
77.5°	195.0	242.6	316.3	354.4	380.5
80°	145.1	185.5	237.8	266.4	275.9
82.5°	99.9	133.2	166.5	173.6	178.4
85°	61.8	78.5	90.4	88.0	88.0
87.5°	28.5	30.9	26.2	19.0	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)